

**REMARKS/ARGUMENTS**

The abstract has been amended to address the points noted by the Examiner in the Official Action. It is believed that the Abstract as amended should be free from objection.

Claims 1-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gillespie et al. in combination with Geus et al. The Examiner contends that the Gillespie reference teaches a process and apparatus essentially as claimed, with the exception of independently controllable blowers, which is taught by Geus. Applicants respectfully request reconsideration by the Examiner and withdrawal of this rejection.

The process and apparatus of the present invention produces a spunbond nonwoven fabric with unique and advantageous product and process characteristics. In particular, the nonwoven fabrics produced by the process and apparatus of the present invention possess an unexpectedly superior balance of softness, strength, formation and cost. These aspects of Applicants' invention are not taught nor made obvious from the prior art of record.

As defined in Claim 1, Applicants' process involves a specific combination of steps, and in particular, separately melting two or more polymeric components, separately directing these components through a spin beam assembly equipped with a distribution plate configured so that the molten polymer components combine at a multiplicity of spinneret orifices to form filaments containing two or more polymer components, extruding the multicomponent filaments from the spinneret orifices into a quench chamber, directing quench air from a first independently controllable blower into the quench chamber and into contact with the filaments to cool and solidify the filaments, directing the filaments and the quench air into and through a filament attenuator and pneumatically attenuating and stretching the filaments, directing the filaments from the attenuator into and through a filament depositing unit, depositing the filaments from the depositing unit randomly upon a moving belt, applying suction from a second independently controllable blower beneath the belt to draw air through the depositing unit and through the belt and directing the web through a bonder and bonding the filaments to convert the web into a coherent nonwoven fabric. In a more specific aspect, as defined, for example, in Claims 5 and 6, the spinneret orifices are arranged at a density of at least 3,000 orifices per meter.

The system or apparatus claims of record define a corresponding combination of structural elements or features, which collectively achieve the unique and advantageous results noted above.

Turning now to the Gillespie et al. reference, the method and apparatus for producing the Gillespie et al. nonwoven webs are shown schematically in Figure 4 and in the accompanying description at Col. 8. In the illustrated embodiment, the filaments are directed through a quench chamber 70. After exiting the quench chamber, the filaments enter Lurgi tubes 72. Compressed air, indicated by reference character 74, is supplied to the Lurgi tubes to cause the filaments to be drawn and attenuated.

Comparing the process and apparatus taught by Gillespie et al. to that defined in the claims of record, it is clear that the Gillespie et al. reference fails to teach or to remotely suggest directing the filaments and the quench air into and through a filament attenuator. The Lurgi tubes taught by Gillespie et al. require a separate source of compressed air, as indicated by reference character 74. The air from the quench chamber 70 is not directed through the Lurgi tubes 72. The Gillespie et al. reference also fails to teach or suggest directing the filaments from the attenuator into and through a filament depositing unit, together with applying suction beneath the belt so as to draw air through the filament depositing unit, as well as through the air permeable belt. The arrangement shown by Gillespie includes a corona discharge device 76 at the discharge end of the attenuator, but it can be seen that this device is spaced apart from the belt and does not constitute a filament depositing unit as defined by Applicants and would not cause air to be drawn through a filament depositing unit.

The Geus et al. reference, which is relied upon as a secondary reference, describes one of many available kinds of apparatus for producing a spunbond web. Indeed, the prior art is replete with a large number of different kinds of apparatus that can be used for producing a spunbond web. The Geus patent contains no teaching or suggestion that would provide a nexus with the Gillespie et al. reference, supporting the Examiner's purported combination of reference teachings. As noted above, Gillespie teaches an entirely different type of apparatus for producing a spunbond web. There would be no reason to modify the apparatus arrangement

shown by Gillespie, and certainly nothing to motivate one skilled in the art to select the spunbond manufacturing arrangement of Geus et al. out of all of the many available kinds of spunbond manufacturing apparatus. Furthermore, there is nothing in the prior art itself to direct or incite this person of skill in the art to pick and choose from the Geus et al. spunbond apparatus, only those elements that would result in the combination of features set forth in applicants' claims. Consequently, considered as a whole, these two references do not render Applicants' claimed invention obvious. Moreover, the prior art of record does not provide a motivation or incentive for departing from the specific arrangement of apparatus taught by Gillespie and instead, to utilize the arrangement of the Geus et al. patent. Furthermore, the prior art of record does not teach or recognize that any unique or advantageous product and process characteristics would be achieved by such a combination. As noted earlier, the present invention provides nonwoven fabrics with an unexpectedly superior balance of softness, strength, formation and cost. This is not taught or made obvious from the prior art of record.

It should also be noted that the spinnerette orifice density claimed by applicants (see for example claims 5-9 and 12-16) is nowhere taught or suggested by the prior art.

For the reasons noted, Applicants request reconsideration by the Examiner, withdrawal of the rejection, and formal notification of the allowability of all claims as now presented.

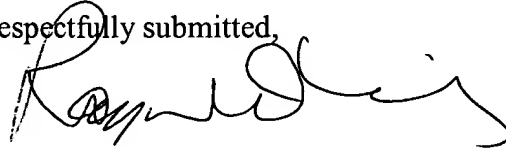
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It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

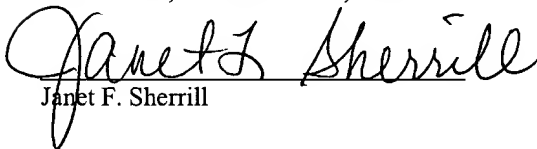


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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on December 1, 2003.

  
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